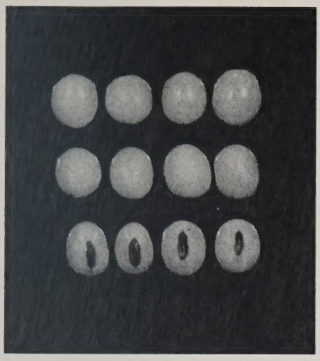
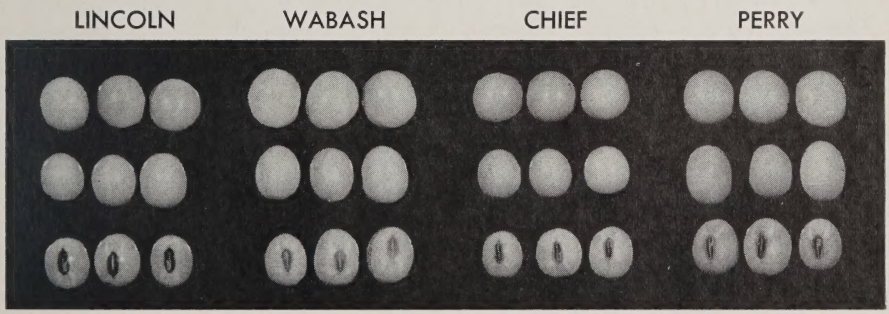


The CLARK SOYBEAN *for Illinois*

By R. D. OSLER and
C. M. WOODWORTH

Bulletin 569 · **Illinois Agricultural Experiment Station**
in cooperation with **U. S. Department of Agriculture**



CLARK is a new high-yielding, high-oil-content soybean similar in appearance to Lincoln except that it has purple flowers. This variety is approximately 8 days later than Lincoln, 6 days earlier than Perry, and gives definite indications of being a higher yielder than either.

Area where adapted. Clark is well adapted to southern and south-central Illinois, where it should normally be early enough to precede winter wheat. It may be grown in central Illinois as a full-season crop in rotations that do not include winter wheat following soybeans. (*See map on page 4.*)

Origin and development. Clark is a selection from the backcross Lincoln × (Lincoln × Richland). It was developed cooperatively by the Illinois Agricultural Experiment Station and the U. S. Regional Soybean Laboratory and has been tested in cooperation with other Stations in the north-central region.

The backcross was made by L. F. Williams[1] at Urbana, Illinois, in 1941, and subsequent selection and preliminary testing were also done by him. In 1948 and following years this variety has been tested at several locations in the soybean belt.

Seed and plant features. Clark seeds are yellow, nearly round, and slightly larger than those of Lincoln, and have a prominent black hilum (seed scar). The plants are medium in height, with some branching, although most of the pods, usually two- or three-seeded, are borne on the main stem.

Like Lincoln, Clark plants have a brown pubescence (short, soft hairs on surfaces of stems and leaves), but unlike Lincoln they bear purple flowers instead of white.

Performance in yield tests. Clark has proved superior to Lincoln in yielding ability, matures somewhat later, and the seeds weigh more. As an average of 25 tests, Clark has matured 8 days later, has yielded almost 6 bushels more to the acre, and the seeds have weighed 1.4 grams more per hundred (Table 1). In all other characteristics observed, Clark is similar to Lincoln.

In each of the six locations where tested in Illinois, Clark yields have surpassed both Lincoln and Chief by a substantial margin (Table 2).

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[1] Agronomist, U. S. Regional Soybean Laboratory, formerly stationed at Urbana.

Table 1. — Agronomic and Chemical Characteristics of Clark, Lincoln, and Chief Soybeans in Illinois Tests, 1948-1952

(Average of tests made at six locations shown in Table 2)

Variety	Average acre yield (25 tests)	Comparative maturity[a]	Lodging rating[b]	Height	Seed quality[c]	Weight per 100 seeds	Protein content[d]	Oil content[d]	Iodine No. of oil
	bu.	*days*		*inches*		*grams*	*perct.*	*perct.*	
Clark	**41.2**	**+8**	**2.1**	**41**	**1.1**	**15.9**	**40.0**	**21.7**	**134.3**
Lincoln	35.3	0	2.2	41	1.5	14.5	39.9	21.8	134.4
Chief	33.6	+9	2.9	50	1.5	13.2	39.9	20.7	133.1

[a] Days earlier (−) or later (+) than Lincoln. [b] 1 = all plants erect; 5 = all plants prostrate. [c] 1 = good; 5 = poor. [d] On a moisture-free basis.

Table 2. — Yields of Clark, Lincoln, and Chief Soybeans, 1948-1952

(Bushels per acre)

Variety	Average of 25 tests	Yields at six locations					
		Urbana 1948-52	Clayton 1949-52	Stoneington 1948-52	Brownstown[a] 1949, 1951-52	Trenton[b] 1949-52	Eldorado 1949-52
Clark	**41.2**	**42.9**	**38.2**	**41.6**	**40.3**	**42.7**	**41.8**
Lincoln	35.3	38.8	33.7	36.5	33.1	36.2	33.5
Chief	33.6	35.4	32.6	30.4	32.9	36.9	33.6

[a] Test field was near Edgewood in 1949 and 1951. [b] Test field was near Freeburg in 1949 and 1950.

Clark has also proved higher-yielding than Wabash and Perry (Table 3), and has matured on an average 3 days earlier than Wabash and 6 days earlier than Perry. Clark also has a better lodging score; the seed have averaged higher in oil content; and the plants are slightly shorter than either Perry or Wabash.

Table 3. — Agronomic and Chemical Characteristics of Clark, Perry, and Wabash Soybeans in Illinois Tests, 1950-1952

(Average of tests made at six locations shown in Table 4)

Variety	Average acre yield (17 tests)	Comparative maturity[a]	Lodging rating[b]	Height	Seed quality[c]	Weight per 100 seeds	Protein content[d]	Oil content[d]	Iodine No. of oil
	bu.	*days*		*inches*		*grams*	*perct.*	*perct.*	
Clark	**39.1**	**−3**	**1.9**	**41**	**1.0**	**16.1**	**40.4**	**21.8**	**135.3**
Perry	35.9	+3	2.3	43	1.4	17.0	40.9	21.1	131.5
Wabash	32.8	0	2.4	45	1.4	14.4	40.1	21.0	130.7

[a] Days earlier (−) or later (+) than Wabash. [b] 1 = all plants erect; 5 = all plants prostrate. [c] 1 = good; 5 = poor. [d] On a moisture-free basis.

Although Clark has outyielded Perry and Wabash at all six locations where tested, the margin at Trenton and Eldorado was narrow and considerably less than at the other four locations (Table 4).

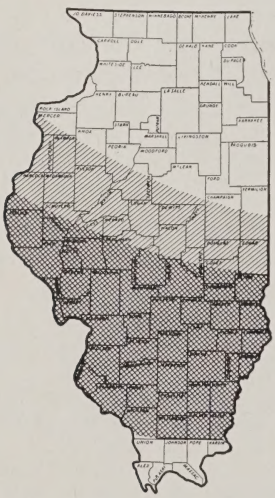
Like Lincoln and Wabash, Clark is resistant to frog-eye leaf spot. To other diseases it has been no more nor less susceptible than varieties now grown in the area where it is adapted.

Table 4. — Yields of Clark, Perry, and Wabash Soybeans, 1950-1952
(Bushels per acre)

Variety	Average of 17 tests	Yields at six locations					
		Urbana 1950-52	Clayton 1950-52	Stoning-ton 1950-52	Browns-town[a] 1951-52	Trenton[b] 1950-52	Eldorado 1950-52
Clark	**39.1**	**42.5**	**41.3**	**38.1**	**35.6**	**40.2**	**37.1**
Perry	35.9	39.0	36.1	31.9	32.2	39.9	36.1
Wabash	32.8	36.7	32.4	28.4	29.2	39.1	31.0

[a] Test field was near Edgewood in 1951. [b] Test field was near Freeburg in 1950.

Planting date. Tests at Urbana in 1950-1952 indicate that Clark should be planted as early as May 1 at this location if maximum yields are to be obtained.



The heavy shading shows where Clark is best adapted in Illinois. In the lighter area Clark can be grown as a full-season crop.

Urbana, Illinois November, 1953
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10M—11-53—53435